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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/713,240

11/13/2003

Khaled El-Maleh

030361

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23696 7590 08/26/2009  
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EXAMINER

VO, TUNG T

ART UNIT

PAPER NUMBER

2621

NOTIFICATION DATE

DELIVERY MODE

08/26/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/713,240	<b>Applicant(s)</b> EL-MALEH ET AL.	
	<b>Examiner</b> Tung Vo	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06/16/2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/13/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification discloses *a storage medium* in paragraph [0062] of the application publication, the specification does not disclose *"a computer-readable"*.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6-8, 11-12, 23, 26, 28-29, 31, 46-47, 49, 51, 53-54, 59, and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuchibhalta (US 5,731,835) as set forth in the previous Office Action dated 03/16/2009.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5, 9-10, 13-14, 30 35, 42, 48, 50, 55, 60, and 66 are rejected under 35 U.S.C.

103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Kato (US 6,415,055)

as set forth in the previous Office Action dated 03/16/2009.

6. Claims 15-17, 36-38, 43, 57-58, and 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Sun (US 6,014,181) as set forth in the previous Office Action dated 03/16/2009.

7. Claims 25, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Westermann (US 6,307,886) as set forth in the previous Office Action dated 03/16/2009.

8. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Westermann (US 6,307,886) as applied to claim 25, and further in view of Kato (US 6,415,055) as set forth in the previous Office Action dated 03/16/2009.

9. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Westermann (US 6,307,886) as applied to claim 25, and further in view of Sun (US 6,014,181) as set forth in the previous Office Action dated 03/16/2009.

10. Claims 32 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Kim (US 2002/0196854) as set forth in the previous Office Action dated 03/16/2009.

11. Claims 18-22, 24, 27, 33-34, 39-41, and 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchibhalta (US 5,731,835) in view of Kodama et al. (US 5,963,673) as set forth in the previous Office Action dated 03/16/2009.

#### ***Response to Arguments***

12. Applicant's arguments filed 01/15/2009 and 06/16/2009 have been fully considered but they are not persuasive.

The applicant stated that the application in condition for allowance or in better form for appeal. In response, the application is not allowable based upon the applied art above. The application is ready for appeal.

The applicant argues that the phrase "computer-readable" is sufficiently clear to a person of ordinary skill in the art.

Although the phrase "computer-readable" is sufficiently clear to a person of ordinary skill in the art but the applicant fails to disclose in the specification. Nowhere in the specification discloses "computer-readable". Therefore, the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

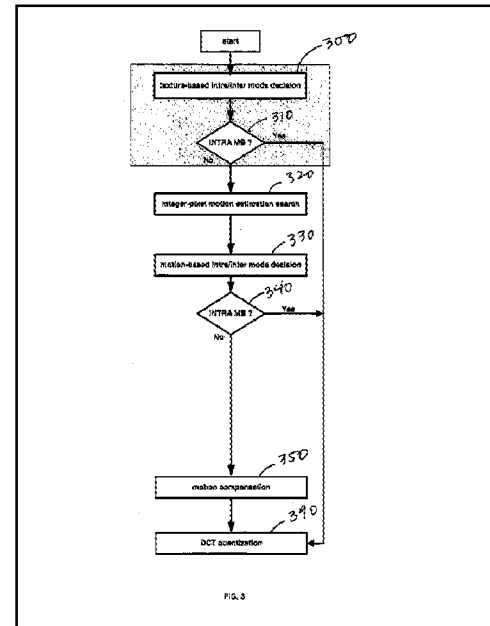
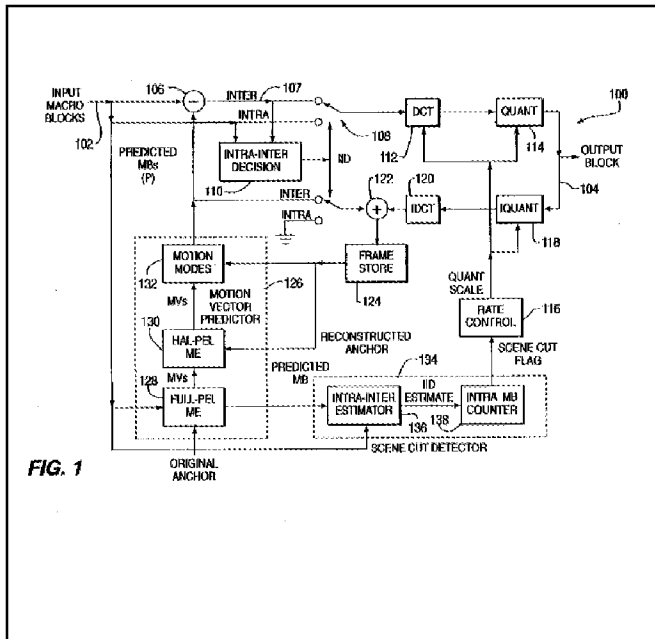
The applicant argues that the method of claim 1 is a multi-step process that may allow selective bypassing of motion estimation and compensation calculations [0039], thus reducing the amount of processing resources consumed [0033].

The examiner respectfully disagrees with the applicant. It is noted that a multi-step process that may allow selective bypassing of motion estimation and compensation calculations and reducing the amount of processing resources consumed are not claimed, therefore the arguments are not persuasive.

Note claim 1 recites “Method for categorizing in a video encoder a portion of a video frame, comprising: using texture information in the portion to determine whether the portion comprises at most a predetermined amount of spatial information; if the texture information indicates that the portion comprises at most the predetermined amount of spatial information, then categorizing the portion as non-predictive; and if the texture information indicates that the portion does not comprise at most a predetermined amount of spatial information, then: using motion information to determine whether the portion comprises at least a predetermined amount of predictive information.”

The applicant further argues that Kuchibholta fails to teach or suggest all the elements of claim 1 and add additional features.

The examiner strongly disagrees with the applicant. It is submitted that Kuchibholta and the claimed invention are the same see the comparison follows:



Description	Kuchibhalta Figure 1	Invention Figures 2-3	
Texture intra/inter mode decision	110	200	300
Intra MB	INTRA, selection mode 108	Intra	310
Integer-pixel motion estimation	128, 130	232	320
Motion-based intra/intra mode decision	Motion Estimation 128, 130	232	330
Intra MB	Motion Estimation 128, 130	232	340
Motion Compensation	126	230	350
DCT quantization	112, 114	202, 204	390

Kuchibholta clearly discloses means for using texture information (calculation of variance of video macroblocks is a determination of texture information that is the same as the described specification of the present invention, [0045]) in the portion (pixels of macroblocks) to

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determine whether the portion comprises at most a predetermined amount of spatial information (110 of fig. 1, col. 1, lines 9-13, the video bistream has the spatial information, I, P, and B frames); means (108 of fig. 1) for categorizing the portion of the video frame if the texture information indicates that the portion comprises at most the predetermined amount of spatial information, then categorizing the portion as non-predictive (col. 3, lines 29-38, note Variance of the input macroblock (Var I) is less than Variance of the residual macroblock (Var R), 108 of fig. 1, the switch selects intramode for encoding, this disclosure indicates the portion is intra or non-predictive); and if the texture information indicates that the portion does not comprise at most a predetermined amount of spatial information (col. 3, lines 29-38, Variance of the residual macroblock (Var R) is less than Variance of the input macroblock (Var R), 108 of fig. 1, the switch selects intermode for encoding, this disclosure indicates the portion is inter or predictive), then: means for performing a motion estimation search (126 of fig. 1, e.g. 128 and 130 for motion estimation search in full and half pixels based on the determined texture information as inter-mode); means for using motion information (126 of fig. 1) to determine whether the portion comprises at least a predetermined amount of predictive information (Predicted MB of fig. 1); wherein the categorizing means (110 and 108 of fig. 1) categorizes if the motion information indicates that the portion comprises at least the predetermined amount of predictive information, then categorizing the portion as predictive (PREDICTED MBs of fig. 1); and if the motion information indicates that the portion does not comprise at least the predetermined amount of predictive information, then categorizing the portion as non-predictive (134-138, INTRA MB of fig. 1, IID ESTIMATE). In view of the discussion above, Kuchibolta clearly anticipates the claimed features.



The applicant further argues that the Kuchibholta disclosure is contrasted against claim 1, where the use of motion information to determine whether the portion comprises at least a predetermined amount of predictive information *is conditioned on the prior determination that* the texture information indicates that the portion does not comprise at least a predetermined amount of spatial information.

The features “*at least a predetermined amount of predictive information is conditioned on the prior determination that...*” *is not claimed in claim 1 (see claim 1 above).* Therefore, the arguments are not persuasive.

The applicant further argues that Kuchibholta fails to teach or suggest wherein the texture information comprises texture bits.

The examiner strongly disagrees with the applicant. It is submitted that Kuchibholta further discloses wherein the texture information comprises texture bits (col. 6, lines 8-20, see also 318 of fig. 3A).

The arguments of independent claims have been addressed for the same reasons as described in claim 1 above.

The applicant lists independent claims 18, 24, 25, 26, 25, 28, 46, 49, 53, 59, and 62, but the applicant does not specify particular limitations in claim that the references did not teach or suggest. Therefore, the argument is not persuasive.

The applicant further argues that Kuchibholta fails to teach or suggest "configuring at least one variable within a complexity control algorithm in accordance with the configuration signal" where "configuring the at least one variable of the complexity control algorithm increases the number of portions in the predictive video frame characterized as non-predictive portions

based upon the texture information," as required by claim 18. Kuchibholta does not disclose such a variable.

The examiner respectfully disagree with the applicant. It is submitted that Kuchibholta teaches "configuring at least one variable (312-318, and 310 of fig. 3A, note at step 328, the process establishes a number of DCT coefficients that will be coded at the initial quantizer scale. As discussed below, both the quantizer scale and the number of DCT coefficients that are coded are adjustable such that VBV underflow can be avoided, adjustable is variable) within a complexity control algorithm (116 of fig. 1, control bit rate) in accordance with the configuration signal; configuring the at least one variable of the complexity control algorithm increases the number of portions (304 of fig. 3A, note the dynamic rate controller 116 increases the bit allocation to the P picture, making sure that the new allocation does not underflow the buffer, and hence, maintain the picture quality) in the predictive video frame characterized as non-predictive portions based upon the texture information (301 of fig. 3A, note att step 310, the process computes an increase (.DELTA.T) for the bit allocation (T). The bit allocation increase is dependent upon several factors including: 1) the distance of the P picture that is about to be coded from the end of the group of pictures; 2) the number of I-mode macroblocks in the P picture; 3) ease of coding the I-mode macroblocks; and 4) the number of bits presently in the VBV).Furthermore, Kodama teaches means (e.g. 58 of fig. 5) for receiving a configuration signal, and means (60 of fig. 5) for configuring at least one variable within a complexity control algorithm in accordance with the configuration to generate the texture information and motion information (MBT and MOTION VECTORS of fig. 5) to determine the macroblock type for

encoding. In view of the discussion above, the claimed features are unpatentable over Kuchibholta and Kodama.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Wednesday, Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tung Vo/

Primary Examiner, Art Unit 2621